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VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
VALENZA, JOSEPH E	

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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GROUP 3600

Application Number: 10/679,613
Filing Date: October 06, 2003
Appellant(s): ZEITLER, DAVID W.

Frederick S. Burkhart
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/13/04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 55-94 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,369,876	Small et al	2-1970
6,629,593	Zeitler	10-2003

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 55-94 are rejected under 35 U.S.C. 112 for the following reasons.

Claims 55, 65, 75, 85 (controlling or adjusting the gaps between articles ...as a function of the position of a control point) and their dependents are based on an inadequately disclosed control point determination module 38 because the issues of gaps between conveyors at different interfaces and coefficients of friction of the last two conveying surfaces has not been adequately addressed by the disclosure and, additionally, the problem of gap selection by selector 66.

Page 7 lines 17-20 define a control point. Page 9 lines 5-8 raise issues that effect the determination of the control point. Since the claims as currently written cover both the handling of identical articles and non-identical articles, issues of friction differences between articles and/or conveyors or article center of gravity will seriously effect the operation of the equipment if non-identical articles are handled. For example, articles with different centers of gravity along their lengths will vary the control point from one that has the center of gravity at its longitudinal center for articles with the same length. A similar situation occurs for articles with the same length but different coefficients of friction. Unfortunately, there is no structure or means disclosed in figure 1-3 that provides for the issue of friction differences between articles and/or conveyors or article center of gravity. Any issue of friction differences and/or center of gravity cause the size of the gap between conveyors to become important in determining the control point. The size of the conveyor gap can effect the friction between the article and the upstream conveyor if the article begins to pivot into the conveyor gap. The size of the gap distorts the control point when there are differences in friction because it delays the point of speed change. Control point determination module 38 is inadequate when the control point determination is used in downstream handling of the article. The reliance of the upstream control point determination caused at the first interface with one size conveyor gap, conveyor surface friction characteristics and surface speeds for use in article gap control at a downstream interface with at least one difference in conveyor gap size, speeds or surface friction characteristics introduces error into the article gap control because the control point will change if these interface values are different from those at the first interface. Page 9 lines 11-31 fails to provide any structure that uses data concerning friction, gap size between conveyors or article center of gravity. This issue may simply be addressed by amending the claims to require that the downstream interface has the same conveyor gap as the upstream interface and the surface friction characteristics of the belts at the downstream interface are the same as those at the upstream interface.

The gap control system 40 is inadequate because page 12 lines 14-18 requires the selector 66 part of the system 40 to depend on the determination of the control point. In addition to the problems involving the determination of the control point mentioned above, system 40 has the additional problem of selecting one of the plural article gaps sensed by array 62 in order to adjust the conveyor speed to adjust the article gap. Since the operation of the system requires unit 66 to function regardless of the number of gaps sensed by unit 62, unit 66 must be claimed. The circuitry in selector 66 must be complex to analysis plural gap dimensions, respective control points on the related articles, article positions and the conveyor speeds to select the article gap to adjust. Not only is the complex circuitry not disclosed, the standards and reasoning for basing the selection are not mentioned so that one of ordinary skill would know how to make and use selector 66 in the system 40.

Claims 55-94 are incomplete because the step of gap selection by device 66 must be done before comparison device 68 can compare the gap with the desired gap. Because gap sensors 62 detect plural gaps, gap selection by device 66 must be included. Since the operation of the system requires unit 66 to function regardless of the number of gaps sensed by unit 62, unit 66 must be claimed.

Claims 59, 69, 79 and 89 and their dependent claims are based on inadequate disclosure. There is no original disclosure for the systems of figures 1-3 assuming control points.

Claims 60, 70, 80 and 90 and their dependent claims are based on inadequate disclosure because the disclosed system determines not measures the control point.

2. Claims 55-94 are rejected under 35 U.S.C. 103 as being unpatentable over Small et al.

The gap measuring means beams 1-47, etc. of Small et al continuously measure the gap between articles as the articles move from one conveyor to the next and will detect and make changes in gap size during the transfer. Because Small et al does not mention a control point, it would be obvious to assume that the control point can be in any part of the article. Note that the control point of the articles can be the front or trailing end. Gap measuring means beams 1-47, etc. of Small et al perform the recited steps in claims 75-94 and meet the claimed elements of claims 55-74.

3. Claims 59, 69, 79 and 89 and their dependent claims are rejected under 35 U.S.C. 132 as containing new matter.

This issue is conceded and withdrawn by the examiner.

4. Claims 55-94 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 6,629,593. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims only differ in obvious variations of breadth and scope.

The terminal disclaimer filed 6/21/04 has not been reviewed for compliance at the time of this action.

(11) Response to Argument

With regard to pages 5-22 of the brief, the following should be noted. First of all, the 132 Declaration by Mr. Jakeway, which was first filed in June 21, 2004 in the parent application SN10/679,613, was addressed by the Examiner in the advisory action as follows:

The declaration filed by Mr. Jakeway fails for the following reasons.

(1) Gap Selection

Paragraph 9 of the declaration suggests that the selected article gap is "simply the farthest downstream gap where control is possible" as discussed in pages 12 and 13 of the specification. Page 12 lines 5+ discuss the situation of plural article gaps being detected. Page 12 lines 17+ tie the article gap selection to the location of the control point 52. The location of the control point determined at the upstream conveyor interface will be different at the downstream conveyor interface if there is any difference in conveyor gap size, speeds or surface friction characteristics between the interfaces. In paragraphs 9-12 of the declaration, Mr. Jakeway does not discuss the problems caused by different conditions at the two interfaces and their effect on the selection of one of a plurality of sensed article gaps. In paragraph 10, Mr. Jakeway dismisses the circuitry needed to select one of a plurality of article gaps as "not ... unduly complex" but fails to illustrate the circuitry design.

(2) Frictional Characteristics and Conveyor Gap Sizes

In paragraph 15, Mr. Jakeway agrees that if the downstream interface has different characteristics from those of the upstream interface would cause problems in getting the correct control for the article to be adjusted. However, Mr. Jakeway simplifies this problem by suggesting that the differences are in ratio and could be easily adjusted for in calculations. While this would be true for friction and speed differences, conveyor gap size and different shaped or center of gravity articles will not be easily handled like ratios. In paragraph 16, Mr. Jakeway argues that conveyors should be synchronized.

The argument is undercut by applicant's intent to cover at least one of the two or three conveyors variable speed relative to at least one other conveyor.

(3) Non-Identical Articles

There is no disagreement between Mr. Jakeway and the examiner on this issue.

(4) U.S. Patent 4,369,876

Mr. Jakeway discusses differences between applicant's device and the Small patent disclosure but fails to understand that the issue is whether the teachings in Small meet applicant's claim language. For example, paragraph 20 of the declaration discusses the lack of any determination of a control point in Small but fails to realize that claims 49-64 and 77-79 do not require control point determination.

ISSUE #1

On pages 5 and 6 of the brief, appellant argues that "1. Having The Same Characteristics at Conveyor Interfaces is Not a Critical Feature of the Invention". As pointed out in page 9 lines 5-8 of appellant's specification "The precise moment when control switches from first conveyor 22 to second conveyor 24 is largely dependent upon the frictional characteristics of the article and the conveyor, as well as the center of gravity of the particular article." Since appellant intends the system to handle non-identical articles, issues of friction differences between articles and/or conveyors or article center of gravity will seriously effect the operation of the equipment.

Appellant further argues "2. There Is No Requirement That Applicant Claim Features Directed to a Separate and Independent Aspect of the Invention " on pages 6 and 7 of the brief. Appellant first argues that the gap control system 40 operates independently of the control point determination module 38. Since the inadequately disclosed selector 66 is required by page 12 lines 14-18 of the specification to be part of system 40 and since selector 66 is dependent on the control point determined for the article upstream by module 38, any claim that mentions a control point and system 40 must include elements 38 and 66. Concerning the assumed control point of page 14 lines 23-27 of the specification, a control point is defined in appellant's specification in page 7 lines 17-20 and its accuracy is relied on by subsystems 66 and 40 to achieve specific article control during conveyance. An assumed control point has no value or accuracy for unit 66 and 40 and will not result in the controlled handling of the articles that is being strived for. Note column 10, lines 55-60 of patent 6,629,593 "For example, it would be possible to utilize gap control system 40 wherein the control point information was merely an assumption as to the location of the control point, such as the center point of the article. While such a system would likely be more inaccurate than a system in which the control point was actually measured". In short, an assumed control point is not the same as a calculated control point and none of the claims require an assumed control point.

Next appellant argues "3. There Is No Requirement That Applicant Claim Only a Theoretically Perfect Embodiment of the Invention" on pages 7-9 of the brief. Appellant's disclosure attempts to show and appellant's claims claim a combination of subsystems that work together to more efficiently handle different articles by different conveyors accurately. It is the examiner's position that appellant's disclosure is only sufficient for arrangements handling identical articles on identical conveyors provided the claims make clear these limitations. Since appellant intends to use these systems for different articles by different conveyors, 35 U.S.C. 112 1st and 2nd paragraphs require the claimed structures to such systems to be adequately disclosed and completely claimed in accordance with the functions required by the claims.

On pages 9 and 10 of the brief, appellant argues "4. Applicant is Entitled to Claim Systems in Which the Conveyor Interfaces of Subsystems 38 and 40 are Different". If the disclosure is adequate to support such claiming, appellant is entitled. Unfortunately, appellant's disclosure does not adequately address how it handles different interfaces between conveyors.

On page 10 of the brief, appellant argues "5. The Examiner Hasn't Established a Factual Explanation Why Interfaces 38 and 40 Must Have the Same Characteristics". Appellant argues that frictional characteristics and conveyor gap size are largely irrelevant. If this is true, why does page 9 lines 5-8 of appellant's specification state "The precise moment when control switches from first conveyor 22 to second conveyor 24 is largely dependent upon the frictional characteristics of the article and the conveyor, as well as the center of gravity of the particular article.". The fact is appellant is contradicting his own specification. Appellant's expert Mr. Jakeway states on page 5 of his declaration "If it is contended that the control point at the interface of conveyors 24, 32 may be different than the control point in going from conveyors 22 to 24 when the friction coefficients have a different ratio, or the conveyor gap sizes are different, this reviewer agrees."

ISSUE #2

On pages 11-13 of the brief, appellant argues that it is not necessary to recite selecting a gap. Because the claims require plural articles, gaps between those articles and because there is no disclosure of controlling the gap between articles by the gap control system 40 without gap selection unit 66, it is essential that claims with these limitations must require unit 66 to make the combination complete and operative.

On page 11 appellant argues " 1. Claims 55-94 Are Allowable Because Gap Selection is Unnecessary When a Controllable Gap is Identined". According to claims 55, etc., a control identifies a controllable gap. According to appellant's disclosure, gap selection is done by unit 66, which is separate from gap control system 40 or the control point determination module 38. Note column 9, lines 10-12 of Patent 6,629,593 says "Gap control system 40 includes a horizontal array of photo-detectors 62 which may be of the same type of photo-detectors as array 42." Since neither control 38 or 40 selects a controllable gap, the claims are incomplete because the identifying of a controllable gap is not done by any disclosed control but by the unclaimed unit 66.

On pages 12 and 13, appellant argues " 2. Claims 55-64 and 75-84 are Allowable Because the Specification Clearly Discloses a System that Detects Only a Single Gap and Renders Gap Selection Unnecessary". Appellant argues that the claims are broad enough to read on detecting one gap and therefore he is entitled to this coverage. The claims require "said control identifies a controllable gap" and, by disclosure, a controllable gap is only determined by selector 66 from plural gaps. Therefore, the claims do not read on detecting a single gap and the specification does not disclose a system that detects only a single gap.

ISSUE #3

On pages 13 and 14 of the brief, appellant argues "The Subject Matter of Claims 59, 69, 79, and 89 Is Fully Disclosed in the Specification".

This issue is conceded by the examiner.

ISSUE #4

On page 14 of the brief, appellant argues "Claims 59, 69, 79, and 89 Do Not Contain New Matter"

This issue is conceded by the examiner.

ISSUE #5

On pages 14 and 15 of the brief, appellant argues "Claims 60-61, 70-71, 80-81, and 90-91 Are Fully Supported Because the Specification Discloses Measuring Control Points". Unit 38 is called a control point determination module as per column 5, line 63 of patent 6,629,593 because the control point is calculated by calculator 56. The use of "measure" which according to the dictionary requires "comparison with a standard" in the specification is in conflict with the disclosed "determination" which as required by the specification requires calculation by calculator 56.

ISSUE #6

On pages 15-22, appellant argues " Claims 55-94 Are Not Anticipated or Rendered Obvious in Light of U.S. Patent No. 4,369,876 Issued to Small". Because Small et al does not mention a control point, it would be obvious to assume that the control point can be in any part of the article. Appellant argues on page 15 that Small et al does not sequentially adjust the gaps between articles at sequential conveying interfaces. Interfaces are between the conveyors 46, etc.of Small et al. Each gap between articles is adjusted by the control system in figure 20.

On page 16 appellant argues " Claims 55-94 Are Allowable Over Small Because Small Does Not Teach, Suggest, or Disclose Controlling the Speed of Motor 49 as a Function of the Position of Any Control Points". Motor 49 of Small et al is controlled as a function of the position of the front end or rear end of the adjacent articles. If it is assumed that the control point is in one of the front end or rear end of those adjacent articles, then the claims are met.

On page 18 appellant argues " Claims 55-94 are Allowable over Small Because Small Does Not Teach, Suggest or Disclose Sequentially Adjusting Gaps Between Articles at a Series of Sequentially Arranged Conveying Surfaces". See preceding rebuttal.

On page 18 appellant argues " Claims 59, 69, 79, and 89 Are Allowable Over Small Because Small Does not Teach, Suggest, or Disclose Assuming a Control Point". Since Small et al focuses on the ends of adjacent articles via the concern about their spacing, the name (control point) that you call those article ends is immaterial.

On page 18 appellant argues " Claims 60-61, 70-71, 80-81, and 90-91 Are Allowable Over Small Because Small Does Not Teach, Suggest, or Disclose Measuring a Control Point". Since one can assume that the control point is one of the ends of the article and since Small et al is measuring the position of those ends relative to each other by beams 1-47 in figure 20 of Small et al, the control point (end of article) is measured in Small et al.

On page 19 appellant argues " Claims 64, 74, 84, and 94 Are Allowable Over Small Because Small Does Not Teach, Suggest or Disclose Making a Downstream Conveyor an Adjustable Speed Conveyor." However, motor 49 adjusts the speed of the conveyor 46 of Small et al to vary the gap between articles.

On page 19 appellant argues " Claims 65-68, 72-73, 85-88, and 92-93, Are Allowable over Small Because Small Does Not Disclose or Suggest Sensing Multiple Gaps ". Small et al senses multiple gaps by using multiple sensors 1-47 to sense each new gap size as the conveyor 46 adjusts the article spacing.

On page 20 of the brief, appellant adds "Additional Comments". Appellant questions the number of separate rejections under 35 U.S.C. 112.

There were four with three remaining.

(1) Claims 55, 65, 75, 85 (controlling or adjusting the gaps between articles ...as a function of the position of a control point) and their dependents are based on an inadequately disclosed control point determination module 38 because the issues of gaps between conveyors at different interfaces and coefficients of friction of the last

two conveying surfaces has not been adequately addressed by the disclosure and, additionally, the problem of gap selection by selector 66.

(2) Claims 55-94 are incomplete because the step of gap selection by device 66 must be done before comparison device 68 can compare the gap with the desired gap.

(3) Claims 59, 69, 79 and 89 and their dependent claims are based on inadequate disclosure. This issue is conceded by the examiner.

(4) Claims 60, 70, 80 and 90 and their dependent claims are based on inadequate disclosure because the disclosed system determines not measures the control point.

On pages 20 and 21 of the brief, appellant argues that the Gap Detector Circuitry is adequately disclosed. Appellant first argues that the examiner allowed similar claims in the parent and mistakenly included the rejection again. Unfortunately, this belief is in error. The claims in the patent that required gap selection such as patent claims 9-21 and 33-51 only have one gap that is of concern. In claims 9-21, the selected gap is only between the first and second article. In claims 33-51 the selected gap is only between the second and third articles. It was the examiner's opinion that since the selection was predetermined the design of selector 66 would be simple. However, there is no requirement in the claims under appeal that the gap is predetermined or limited to a single gap regardless of other factors in the same manner as is present in the patent claims. Therefore, the adequacy of the gap selector 66 is inadequate because the selection is based on more factors, which also have not been explained.

On pages 21 and 22 of the brief, appellant argues the adequacy of disclosure with regard to conveying "Non-Identical Articles". Non-identical articles are appellant's articles of intended use with the claimed system. The examiner was offering to drop various rejections under 35 U.S.C. 112 if the claims were limited to identical articles, which would not require as complex controls. However, appellant chose not to so limit his claims and hopes that the Board of Appeals will accept the disclosure as filed.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
Joseph Valenza

JOSEPH E. VALENZA
PRIMARY EXAMINER

JEV
October 28, 2004

Conferees
Khoi H. Tran
JRB J Bridwell

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695